

ABSTRACT OF THE DISCLOSURE

A computer readable medium holding data of a molecular model of a ligand-gated ion channel receptor and/or a computer system for modeling said receptor are provided by the instant invention. The molecular model can be used to design novel compounds having activity as non-competitive inhibitors of the ion channel. A preferred embodiment of the invention relates to nicotinic acetylcholine receptors. Compounds having activity as non-competitive inhibitors of ligand-gated ion channel receptors and methods for inhibiting the receptor and treating diseases or disorders mediated by function of the receptor are also disclosed.